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21 FEB 1962

CIA HISTORICAL REVIEW PROGRAM
RELEASE AS SANITIZED
1998

MEMORANDUM FOR: Deputy Director (Intelligence)

ATTENTION: Assistant to D/D (REC)

SUBJECT: Information on Surface Transportation in the USSR
for the United States Arms Control and Disarmament Agency.

Attached is information requested by Mr. Barry Holmes of the Arms Control and Disarmament Agency on surface transportation in the USSR for use in the preparation of a plan for surveillance associated with disarmament in the USSR. We understand that Mr. Holmes hopes to receive this information by e.o.b. 21 February 1962.

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Acting Assistant Director
Research and Reports

Enclosures:

1. Subject Report
2. Copy of CIA/

21 FEB 1962

Information on Surface Transportation in the USSR

I. Introduction

The purpose of this paper is to supply information on surface transportation in the USSR for use in estimating the magnitude of a surface transportation surveillance system associated with disengagement. Some notion of the magnitude of this task of surveillance can be obtained from the following sections which contain information on railroads, highways, maritime and inland water transport. See also CIA/ER 21 61-3, February 1961, Transportation Growth and Trends in the USSR, 1950-65, which is included as Attachment A to this paper.

Surveillance of the transportation system of the USSR as a whole is a vast undertaking. If traffic movements requiring surveillance were restricted only to those moving between rather large designated zones, the number of facilities that would have to be kept under surveillance would be reduced substantially.

II. Railroad Yards

Major freight classification and terminal yards would be locations at which traffic could be subjected to some surveillance without halting all traffic on major railroad routes. Through trains whose cars do not require classification at intermediate yards, nevertheless, would present special problems in surveillance.

A Soviet article published in 1957 states that the railroad system has approximately 200 major freight yards which handle a total of 400,000 cars daily and make up more than 7,000 trains daily.² In the following tabulation are listed 235 of the more important freight classification and terminal yards. These yards are listed alphabetically by name of the yard and not necessarily by the name of the location of the yard.

The railroad system on which each yard is located is also listed. Place names on the railroads and the location and extent of each railroad system are indicated on the map, Attachment A, Figure 5.

² L. Chertkov, "Progressive Working Methods in Transport and their Economic Efficiency", in Sotsialisticheskiy Trud, no 4, April 1957. U.

<u>Yard</u>	<u>Railroad System</u>	<u>Remarks</u>
Alchevskoye (Voroshilovsk)	Donets	
Aksu Ata I	Kazakh	
Altayskaya	Tomsk	said in 1959 to process 2,500-3,000 cars daily.
Antratsit	Donets	
Antsarskaya	Tomsk	
Arys'	Tashkent	
Bekal	South Ural	
Boku Freight	Transcaucasian	
Balaichinsky	Azerbaijanian	
Balaikov	Southeastern	
Bannaya	Volga	
Berezhinsk	Omsk	
Berezovichi	Northern	
Bersaud	Tomsk	
Besbyuk	North Caucasus	
Betorsk	Kuybyshev	
Bentin	Ufa	
Bogolyubovo	Kuybyshev	
Biryulevo	Moscow-Viatka-Benbass	
Bogoslovsk	Sverdlovsk	
Boysay	Moscow	
Brest Tsentral'nyy	Belorussian	
Brest Vostochnyy	Belorussian	
Bryansk L'govskiy	Moscow-Kiev	
Bry	Northern	
Chalybinsk Glavnyy	South Ural	
Chersukovo	East Siberian	
Chernogorskiye Kupi	Krasnoyarsk	
Chirchik	Tadzhik	
Chita	Transbaykal	
Chop	L'vor	
Chulyanskaya	Tomsk	
Chumakovo	Donets	
Chusovskaya	Sverdlovsk	
Darnitsa	Southwestern	
Dobal'tsovo	Donets	
Doma	Kuybyshev	
Dlyavka	Stalin	
Dubrovka Chalybinskaya	South Urals	
Elektrostantsiya	South Urals	
Fastov	Southwestern	
Gomel'	Belorussian	
Gor'kiy	Gor'kiy	
Gor'kiy Freight	Gor'kiy	
Gorlovka	Donets	
Goryainovo	Stalin	
Groznyy	Orkhonikidze	
Gubakha	Sverdlovsk	Probably processes over 3,000 cars daily.

<u>Yard</u>	<u>Railroad System</u>	<u>Remarks</u>
Oudron	Oresburg	
Ilovayskoye	Dorets	
Imeni Makisim Gor'kogo	Volga	
Imeni Tarasa Shevchenko	Odessa	
Indskaya	Tomsk	Soviets claim capability of 4,000 cars daily.
Irkutsk	East Siberia	
Istishsheyevo	Ufa	
Izhevsk - II	Kazan'	
Izagan	Ashkhabad	
Mal'mius	Donets	
Kaisagay	Tomsk	
Kandalap	Tomsk	
Keraganda	Kazakh	
Keraganda Ural'maya	Khersonia	
Kirgaly	South Urals	
Kirovskoye	North Caucasian	
Kisan'	Kazan'	
Krasnatin	Southwestern	
Krasnovo	Tomsk	
Khabarovsk Vtoriy	Far Eastern	
Khar'kov Bolshovskiy	Southern	
Khar'kov Freight	Southern	
Khar'kov North	Southern	
Khovrino	October	
Kinel'	Kuybyshev	
Kirov	Gor'kii	
Klyaz'ev Freight	Southwestern	
Kisel'	Sverdlovsk	
Knyazevka	Volga	
Kochetovka Pervaya	Moscow - Ryazan'	
Kol'omogino	Tomsk	
Konstantinovka	Donets	
Kovel	L'vov	
Krasnogradskaya	Donets	
Krasnodar Severoziyiskiy	North Caucasian	
Krasnogorsk II	Ashkhabad	
Krasnograd	Kharkov	
Krasnogorsk	Donets	
Kropachevo	South Urals	
Kryash	Kuybyshev	
Kupiansk-Uklovoy	Donets	
Kursk	Moscow-Kursk-	
Kuzkovo	Bukhara	
Kuybyshev	Gor'kii	
Kuybyshevka-Postochmaya	Kuybyshev	
	Amur	
		Soviets claim capability of 4,000 cars daily.

<u>Yard</u>	<u>Railroad System</u>	<u>Remarks</u>
Leningrad Freight Baltic	October	
Leningrad Freight Moscow	October	
Leningrad Freight Varshevskiy	October	
Leningrad Kavalochnyy	October	
Leningrad Vitebskij	October	
Likhnya	Southeastern	
Liski	Southeastern	
Lonovaya	Southern	
L'vov	L'vov	
Izmaylovo	Gor'kiy	
Magnitogorsk	South Urals	
Makhtch-Gala Ftoraya-Portovaya	Ordzhonikidze	
Makushino	Ossetia	
Mandrykino	Donets	
Metallurgicheskaya	South Urals	
Mitskiy-Dmit'evskaya	North Caucasian	
Minsk	Ordzhonikidze	
Moskalinskij	Belorusian	
Nosovo	Donets	
Dneprovsk	October	
Losinostrovskaya	Northern	
Lysobline	Moscow-Berak-Bonbars	
Perovo	Moscow-Ryazan'	
Pedzokovskaya	Kalinin	
Sortirovochnaya	Moscow-Ryazan'	
Freight, Kurak	Moscow-Kursk-Bonbars	
I, Freight	Moscow-Ryazan'	
Freight, Pavloskaya	Moscow-Kursk-Bonbars	
Moskovka	Ossetia	
Madrasaya	Stalin	
Murmansk	Kirov	
Murom	Smena'	
Myt' Cherkas	Jar' Western	
Radishchinsk (Sarov)	Zvenilovsk	
Makhichevan' Donaknya Freight	North Caucasian	
Sechin	Southwestern	
Hikel'	Obensburg	
Hikitovka	Donets	
Kirkmedesprovat Uzel	Stalin	
Novotrusnetek Classification	Tomsk	
Neverossiysk	North Caucasian	
Novosibirsk	Tomsk	

Said in 1959 to process
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2,500-3,000 cars daily.

Probably processes over
2,500 cars daily.

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<u>Card</u>	<u>Railroad System</u>	<u>Remarks</u>
Kovyy Port	October	
Odessa Freight	Odessa	
Odessa Perekyp'	Odessa	
Odessa Port	Odessa	
Crusik	Crusik	
Orel Freight	Moscow-Kursk-Donbass	
Greensburg	Greensburg	
Crusik	Greensburg	
Genova	Southern	
Penza	Kuybyshev	
Pera	Sverdlovsk	
Perovo	Moscow-Pyatza	
Petrovavlevsk	Crusik	
Prisady	Moscow-Kursk-Donbass	
Revolzhka	Amar	
Rost	Stalingrad	
Atchinsk	Southeastern	
Dutshenskovo	Donets	
Ruzayevka	Kuybyshev	
Rybinsk (Scherbakov) Freight	Northern	
Rybnyye	Moscow-Pyatza	
Saratov	Volga	
Sartana	Stalin	
Semipalatinsk	Kazakh	
Sergo Witalevskaya	South Ural	
Shechkin	Moscow-Kursk-Donbass	
Shapotovka	Southeastern	
Sibirrotavia	Istria	
Shashay	October	
Slovakich	Sverdlovsk	
Smolensk	Kalinin	
Syzchaka	Sverdlovsk	
Stalingrad	Volga	
Stalino	Donets	
Sverdlovsk	Sverdlovsk	
Sverdlovsk Freight	Sverdlovsk	
Tashkent-Freight	Tashkent	
Tatarskaya	Crusik	
Tayga	Tomsk	
Tikhoretskaya	North Caucasian	
Tritsentraya (Dneprodzerzhinsk)	Stalin	
Trutovaya	Donets	
Turcot Station 27th Kilometer	North Caucasian	
Uaz	South Ural	

<u>Yard</u>	<u>Builtroad System</u>	<u>Remarks</u>
Urals'yevskaya	Tashkent	
Uralsu	Ufa	
Usat'y, (Proksp'yevak)	Terek	
Uvek	Volga	
Ulyovaya Perwaya	Moscow-Kursk-Donbas	
Vagonosavod	Sverdlovsk	
Valuyki	Southern	
Velikie Luki	Stalin	
Verkhovetsovo	Lithuanian	
Vilnius	October and Kirov	Said in 1959 to process 2,500-3,000 cars daily.
Volkhovstroy	Northern	
Volgda	Moscow-Ryazan'	
Voskresensk	Northern	
Vepol '70	Azhdikhod	
Vysokov	Moscow-Ryazan'	
Vladikavkaz	Northern	
Darvalayl' Prikaz' (Pier)	Donets	
Yaninovskaya	Moscow-Kursk-Donbas	
Yanuya Polysma	Moscow-Kursk-Donbas	
Yelata Glayayi	Northern	
Yenakiyev	Donets	
Yerevan	Transcaucasian	
Tifino	Neman'	
Zaporozh'ye Levoye	Stalin	
Elista	South Urals	
Izhevsk	Gliman	

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III. Rail Transloading Areas at the USSR-European Satellite Borders

Because USSR railroads are broad gauge (5' feet) while the European Satellite railroads are standard gauge, (4' 8 1/2") transfer of through rail traffic from cars of one gauge to the other is necessary at border crossing points. The performance of this transfer is the function of the transloading areas.

The transloading areas or complexes along the borders extend from ten to twenty five kilometers on either side of the border, and consist of a number of yards or stations all of which have dual gauge parallel tracks. Some of the stations have cranes, overhead ramps for gravity transfer of coal and ore, and pumping facilities for the transfer of petroleum while others contain platforms between dual gauge tracks over which cargo is transferred by manual labor. Some freight transloading stations have hoists where freight cars are lifted and wheel sets are exchanged, thus permitting the railroad car to operate on either gauge, and eliminating the physical transfer of the loading.

There are ten main transloading complexes along the USSR-European Satellite borders. From north to south they are:

Locations of the Transloading Complexes

In the USSR

1. Kaliningrad
2. Chernovitshy
3. Grodno
4. Berestovitsa
5. Brest
6. Kovel
7. Mostilsk

8. Chop

Chop

9. Dornesti
10. Ungury

In Poland

- Braniewo
Gdańsk
Sokółka
Narowia
Terespol
Gdynia
Przemyśl

In Czechoslovakia

- Cierna nad Tisou

In Hungary

- Esztergom

In Romania

- Rodăuți
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These complexes vary in importance. The more important ones from the stand point of traffic, however, are numbers 1, 5, 7, 8 and 10. The most modern transloading equipment is located at 5, 7 and 8. The principal complexes used by the

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USSR for military traffic to East Germany are numbers 5 and 7. Smaller quantities of military cargoes could be moved surreptitiously, however, at any point along the border where the rail lines of the respective countries meet, and which are not listed among the principal transloading areas mentioned above. For example, a standard gauge railroad crosses the Polish border at Kroscienko, Poland and extends to Sanok in the USSR, a short distance southwest of Lvov. Also, a wide gauge line crosses the USSR border at Uzhgorod, and extends to Velke Kapusany in Czechoslovakia where it connects with the Czechoslovakian system.

IV. Highways

Since origination and termination of shipments could occur at virtually any industrial or military installation or storage facility on or near a highway without rehandling enroute, it is not possible to maintain effective surveillance of highway traffic at any established highway transportation centers. Check points would, therefore, probably have to be established along key intercity routes and at least some traffic would have to be stopped.

The network of improved roads in the USSR is very limited. At the end of 1960 there were only 77,100 kilometers of paved roads.* This is about 4 percent of the length of the US system of similar roads.

Soviet paved roads are almost exclusively 2 and 3 lane asphalt roads. A very limited number of unpaved but otherwise improved roads are considered to be all weather. Most unpaved roads are in very poor condition most of the year. The highway network in the USSR is most dense in the more populated areas. Perhaps 80 percent of the roads are located west of the Volga River.

Nearly all major population and industrial centers in European USSR are connected by paved highways. The network is not well developed, these routes are often circuitous. The number of intercity highways in Asian USSR are extremely limited.

Listed below are the principal intercity highway links as they radiate from major populated and industrial centers. Figure 15 of attachment A is a map of selected highways in the USSR; the following list, however, serves to update and revise some information on the map.

Principal Paved Roads in the USSR

- Moscow - Minsk - Brest
- Moscow - Zhlobin - Brest
- Moscow - Leningrad - Vyborg (Finnish Border)
- Moscow - Yaroslavl' - Kostroma and Vologda
- Moscow - Gor'kiy - Kazan' - Ufa
- Moscow - Ryazan' - Penza - Kuybyshev
- Moscow - Kharkov - Simferopol'

* A paved road is one that has been graded and surfaced with either a water-resistant material or a material which facilitates drainage--that is, concrete or asphalt.

** Excludes local or short distance roads regardless of quality.

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Leningrad - Tallin or Tartar or Pakov - Riga - Kaliningrad
Leningrad - Pakov - Vitebsk - Kiev - Odessa
Leningrad - Pakov - Vilna
Leningrad - Petrozavodsk
Kiev - Zhitomir - Lutsk - (Polish Border)
Lvov - (Czechoslovakia Border)
Kiev - Kharkov - Rostov - Grozny - Baku
Kiev - Kursk - Voronezh - Saratov
Lvov - Lutsk - Brast (Polish Border)
Lvov - Uzhgorod - Chep (Hungarian Border)
Lvov - Vinnytsia - Dnepropetrovsk - Stalino
Odessa - Kishinev - (Romanian Border)
Odessa - Shchuchayev - Kirovgrad - Poltava
Minsk - Vilna - Kaunas
Minsk - Kaliningrad
Rostov - Novorossiysk - Sukhumi - Batumi
Rostov - Volgograd - Saratov - Krasnodar
Tbilisi - Batumi
Tbilisi - Yerevan
Tbilisi - Baku
Yerevan - Batumi
Tashkent - Stalinabad
Tashkent - Chinkent - Frunze - Alma Ata
Tashkent - Osh - Frunze
Tashkent - Balkhar - Kholm (Afghanistan Border)
Tashkent - Balkhar - Ashkhabad
Chelyabinsk - Sverdlovsk - Perm
Chelyabinsk - Magnitogorsk
Chelyabinsk - Kurgan - Omsk - Novosibirsk
Chelyabinsk - Kustanay - Kokshetov - Alma-Ata
Orenburg - Kuybyshev
Orenburg - Ufa
Orenburg - Orik - Turgay - Kyak Orda - Chinkent
Vladivostok - Khabarovsk - Blagoveshchensk

V. Inland Waterways

The USSR has an impressive navigable inland waterway system. There were about 140,000 kilometers of navigable waterways at the end of 1960. Almost the entire system freezes and becomes unnavigable for periods varying from 6 to 9 months each year. A map of the system is included as figure 17 of attachment A.

Over half of the navigable system is located east of the Volga River in sparsely populated areas. The number of rail served inland ports east of the Volga River and its tributaries in the area of the Urals is about 40. Access to these waterways other than through rail served ports is limited to a few non-rail served ports and landings.

The inland waterway system including the Volga-Kama basin and west is relatively much better developed. There are about 100 rail served inland ports on this portion of the inland waterway system, and a considerable number of non-rail served landings are also available along these waterways. Most of these landings are served by local unpaved roads.

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VI. Soviet Rail-served Seaports

Listed below are 115 ports of the USSR graded in accordance with a system used by the Office of Naval Intelligence. There are three classes of port: 1) 22 principal (P), 2) 25 secondary (S), and 3) 68 minor (M). The ports are graded on the basis of their naval and commercial importance, their military traffic handling capacity, and their piers and cargo handling equipment. In the cases of most of the minor ports there is little or no dockage space and no cargo handling equipment which means that ocean going vessels have to load and offload in the roadstead.

A. Black Sea and Sea of Azov

1. Mariupol'
 2. Nikolayev
 3. Novorossiysk
 4. Odessa
 5. Peti
 6. Sevastopol'*/Balaklava
 7. Tiflis
 8. Batumi
 9. Berdyanak
 10. Feodosiya
 11. Kharcova
 12. March - Kamysh - Batran
 13. Taganrog
 14. Yalta
 15. Yevp
 16. Adler
 17. Anapa
 18. Azov
 19. Gagry
 20. Genichesk
 21. Gediminty
 22. Khosta
 23. Ochamchire
 24. Ovidiopol
 25. Pitsempa
 26. Primorsko Akhtarak
 27. Psirtakha
 28. Rechi
 29. Suhumi
 30. Taman'
 31. Veliok
 32. Yenikale
 33. Yevpatoria

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B. Baltic Sea

1. Baltijsk
 2. Kaliningrad
 3. Klaipeda
 4. Leningrad

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5. Liepaya
6. Riga
7. Tallinn
8. Ventspils
9. Vyborg
10. Klyuchevore
11. Lomonosov
12. Paldiski
13. Parau
14. Primorsk
15. Uras/Vysotsk
16. Aynach
17. Girulyay
18. Iksa
19. Kinosaluu
20. Koskalovo
21. Lebyazh'ye/Krasnaya Gorka
22. Koirhe
23. Marvage
24. Molodetchnaya
25. Ovichi
26. Pavlosta
27. Pionerskiy
28. Piza
29. Pulkovo
30. Repeti
31. Roys
32. Saalkraste
33. Seastroretsk
34. Skulte
35. Sven'tosha
36. Svetlogorsk
37. Tersane
38. Ust' Luga
39. Virteu
40. Yantarnyy
41. Zelenogradsk
42. Zelenogradsk

C. Barents - White Sea

1. Arkhangelsk
2. Murmansk
3. Belomorsk
4. Chelnopushka
5. Kozai
6. Onega
7. Sachenga
8. Severodvinsk
9. Vayenga
10. Chapa

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11. Kols
12. Mokmatkins Pakhta
13. Pen'gona
14. Raznavolok

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D. Far Eastern Basin

1. Melkhoika
2. Vlindivostok
3. Sovetskaya Gavan'
4. Sukhta Andreyeva
5. Sukhta Bol'shogo Kaznya
6. Sukhta Kazyushkova
7. Sukhta Perevoznya
8. Sukhta Razboynik
9. Sukhta Sedimi
10. Sukhta Sukhodol
11. Sukhta Troitay
12. Sukhta Vampausu
13. Khassan
14. Pos'yet
15. Slavyenskiy Zaliv

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E. Caspian

1. Astrakhan
2. Baku
3. Gur'yev
4. Krasnovodsk
5. Matkachchala
6. Alyat
7. Astara
8. Lashkeran'
9. Neftchala
10. Port Il'icha
11. Sumgait

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